

**Listening to the Lake Radio Program**  
**Lake Superior Coaster Brook Trout Initiative**  
**8/10/05, KUMD Radio, Duluth, MN**  
**9 minutes**

*(Opening music)*

Welcome to Listening to the Lake. I'm Marie Zhuikov with UMD's Minnesota Sea Grant Program.

Today we'll learn about a fish native to Lake Superior called the coaster brook trout. Long ago they were incredibly abundant, causing fishing scenes reminiscent of the smelt runs during the 1960s and 70s. We'll investigate what caused their decline and an initiative that's trying to help coaster brook trout rebound.

But first, here's what the lake had to say yesterday morning near the mouth of the Lester River.

*(Enter lake sounds)*

As you can tell, it's raining, which we need. The water temperature on the western end of Lake Superior averages 64 degrees. Wednesday's nearshore marine forecast calls for a north wind at 5 to 10 knots, becoming westerly around midday. There's a slight chance of thunderstorms with waves 2 feet or less. Tonight the wind will continue from the west at 5 to 10 knots. Chance of thunderstorms with waves 2 feet or less.

*(Fade out lake sounds)*

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Brook trout are beautiful. If you've ever caught one or seen one at the Great Lakes Aquarium, you know what I mean. Their silvery green body sports yellow patterns and bright red spots. Distinctive red fins edged in white flank their deep red belly.

One brook trout strain gets larger than the rest and lives in Lake Superior. It's called the coaster brook trout.

Up until the 1880s, settlers and visitors to the coast of Lake Superior delighted in the abundance of this fish and the ease with which it could be caught. Anglers flocked to the shore during coaster spawning runs.

N.A. Winchell described the scene like this in his 1880 geological survey report:

"The brook trout is an object of wanton destruction in northeastern Minnesota....One stream after another is visited. A camp is pitched beside each where it empties into the lake. Then for several days, perhaps a week, the riverbanks are lined with the creeping, stealthy forms of the fishermen throwing every temptation the ingenuity of man can devise before the eyes of the wary trout. By diligently and patiently continuing at their

posts through every hour from daylight until evening, it is surprising if any fish are spared in the stream."

Well, not many were spared, it seems. The bottom dropped out of the coaster brook trout population, leading to warnings about their scarcity and efforts to restock them as early as 1886.

Jeff Gunderson, acting director and fisheries specialist with Minnesota Sea Grant says overfishing combined with stream habitat destruction by the logging industry pulled a double punch for these tasty fish. The later introduction of competing species such as brown trout, steelhead, and salmon probably didn't help coasters cope, either.

Currently, coaster strongholds exist on Isle Royale, in the Upper Peninsula of Michigan and in the Nipigon Bay region in Canada. Coasters are also found in small numbers along Minnesota's North Shore.

In 2003, over 20 organizations got hooked on coasters again. But this time it is an effort to rehabilitate this fish. The chance that self-sustaining populations of coasters can be reestablished is the lure that caught natural resource agencies and organizations as well as university staff and citizens. They don't expect to restore numbers to historic levels, however. Gunderson describes why:

*"Things have changed and evolved and so it's just not practical to expect that we can bring them back to the state that they were in. But they do have a legacy in Lake Superior and I think it's something that we want to bring back as much as practical."*

The slogan for the Lake Superior Coaster Brook Trout Initiative is coaster brook trout: linked to the lake, tied to the past. The initiative faces many challenges. The first is to define just what a coaster brook trout is. Gunderson explains:

*" 'What is a coaster?' has been a very significant question because some believe it might be a genetic strain of brook trout somewhat different and that relates to stocking efforts. If it's a separate strain, you have to go get that strain and bring it in to stock it. If it's not separate – if it's just an ecological variant or life history variant – then there's something else that causes them to be coasters. Our answer at this point seems to be that they're not distinctive genetically speaking. They are a brook trout."*

So the definition of a coaster is a brook trout that spends part or all of its life in Lake Superior. Easy enough. Now how do you ensure that stocked fish become Lake Superior coaster brook trout and not stream brook trout?

*"Well, at this point we've found out that we cannot ensure that these fish go out to the lake and become coasters. We can stock lots of brook trout -- Wisconsin I think has stocked 25 million over the last 100 years or so -- and we don't have a whole lot to show for some of our stocking efforts. There has been some stocking up in Grand Portage by the US Fish and Wildlife Service that has resulted in fish leaving the stream, going out to*

*the lake, and returning to spawn, but we really don't have a good handle on how to get them to develop that life history variation."*

Another challenge to the initiative is assessing whether enough habitat remains. Researchers from UMD and UWS looked at coaster habitat in Nipigon Bay, Ontario. Their study builds on one that tracked coasters in the bay with radio telemetry. Jeff Schuldt, an assistant professor at the UWS, describes the project.

*"We went back and tried to describe the areas that these brook trout were using and the areas that they weren't so we have a better handle on the types of physical habitat that coaster brook trout require."*

The researchers found that coasters take advantage of different types of food among the rocks and plants at different depths. But do they know yet exactly what coasters need to survive?

*"The only honest answer to that is, no, we don't know exactly. One of the other things that is challenging is, because the population is reduced to these small remnant groups of fish, like a group of fish that still exist in Nipigon Bay, that might be warping our perspective on where they can live. There might be other reasons why there are fish still in Nipigon Bay, for example, the fact that it's so much more isolated than the U.S. coastline...is that the only kind of habitat that brook trout live in? We don't know the answer to that."*

So it seems there's a lot more to find out about this fish. Schuldt said other researchers around the Lake Superior Basin are studying migration behavior, spawning locations, genetics, and stocking success. Minnesota Sea Grant organized a coaster brook trout research symposium in 2003 so that scientists could share their knowledge and work with natural resource managers to develop a rehabilitation plan.

Minnesota and Ontario have instituted size limits to prevent overharvest. Minnesota anglers can keep brook trout over 20 inches and can only fish for trout from mid-April through Labor Day below posted boundaries.

Angler and outdoors writer Mike Furtman welcomes the coaster brook trout initiative.

*"We're at the southern edge of the brook trout range... and it makes sense that if we can rehabilitate this fishery, that Lake Superior probably is about as good a place as anywhere on the planet to grow brook trout. Being at the southern edge, you know, the waters are more fertile than those further north where large brook trout still exist."*

*"People travel all over North America to catch large brook trout ...so the thought of being able to catch them here again at a large size I think tickles the fancy of all trout anglers."*

But lest history repeat itself – Furtman cautions:

*"From an angler's perspective, although it excites me that there's the possibility of again being able to catch coaster brook trout, from a conservation perspective, I just think it's important that we restore or rehabilitate populations of fish that are native to Lake Superior. ... They're like wolves in the north woods – they were a major predator in Lake Superior. So I applaud the efforts to get these fish back to a self-sustaining population."*

To learn more about the Lake Superior Coaster Brook Trout Initiative, visit the Trout Unlimited Web site at [www.tu.org](http://www.tu.org). Look on their site map for Bring Back the Natives and Coaster Brookies. I'm Marie Zhuikov for Listening to the Lake from the Minnesota Sea Grant Program at UMD.